

COMBINATIONS PROPOSED IN "THE HIGHER PLANTS OF OREGON"

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There has been some question as to the validity of certain new combinations proposed in the "Manual of the Higher Plants of Oregon," recently published by the writer. The citations required if one is to adhere strictly to the International Rules (Ch. 3, Sec. 6, Art. 44), are, therefore, published herewith. Numbers in parentheses refer to pages of the "Manual" on which the new combination was made.

TOFIELDIA OCCIDENTALIS Wats. var. **intermedia** (Rydb.) comb. nov. *T. intermedia* Rydb., Bull. Torr. Club 27: 528. 1900. (p. 189)

BRODIAEA DOUGLASII var. **Howellii** (Wats.) comb. nov. *B. Howellii* Wats., Proc. Am. Acad. Sci. 14: 301. 1879. (By error as *B. grandiflora* var. *Howellii*, p. 199)

HABENARIA ELEGANS var. **multiflora** (Rydb.) comb. nov. *Piperia multiflora* Rydb., Bull. Torr. Club 28: 638. 1901. (p. 219)

ERIOGONUM OVALIFOLIUM var. **ochroleucum** (Small) comb. nov. *E. ochroleucum* Small, Mem. N. Y. Bot. Gard. 1: 123. 1900. (p. 256)

ATRIPLEX PATULA var. **obtusa** (Cham.) comb. nov. *A. angustifolia* var. *obtusa* Cham., Linnaea 6: 569. 1831. (p. 267)

LEWISIA COTYLEDON var. **Howellii** (Wats.) comb. nov. *Calandrinia Howellii* Wats., Proc. Am. Acad. Sci. 23: 262. 1888. (p. 281)

ARENARIA ACULEATA var. **uintahensis** (Nels.) comb. nov. *A. uintahensis* Nels., Bull. Torr. Club 28: 7. 1899. (p. 286)

SILENE OREGANA Wats. var. **filisecta** comb. nov. *S. filisecta* Peck, Proc. Biol. Soc. Wash. 47: 186. 1934. (p. 296)

ANEMONE GLOBOSA var. **lithophila** (Rydb.) comb. nov. *A. lithophila* Rydb., Bull. Torr. Club 29: 152. 1902. (p. 309)

AQUILEGIA FORMOSA var. **flavescens** (Wats.) comb. nov. *A. flavescens* Wats., Bot. King Geol. Expl. 40th. Par. 5: 10. 1871. (p. 312)

DICENTRA CUCULLARIA var. **occidentalis** (Rydb.) comb. nov. *Bicuculla occidentalis* Rydb., Bull. Torr. Club 29: 160. 1902. (p. 323)

DRABA REPTANS var. **stellifera** (Schulz.) comb. nov. *D. caroliniana* f. *stellifera* Schulz., in Engler, Pflanzenr. 4¹⁰⁵: 333. 1927. (p. 326)

DESCURAINIA RICHARDSONI var. **viscosa** (Rydb.) comb. nov. *Sophia viscosa* Rydb., Bull. Torr. Club 29: 238. 1902. (p. 340)

DESCURAINIA PINNATA var. **filipes** (Gray) comb. nov. *Sisymbrium incisum* var. *filipes* Gray, Pl. Fendl. 8. 1849. (p. 340)

DESCURAINIA PINNATA var. **halictorum** (Cockerell) comb. nov. *Sophia halictorum* Cockerell, Bull. Torr. Club 25: 460. 1898. (p. 340)

DESCURAINIA PINNATA var. *paradisa* (Nels. & Kenn.) comb. nov. *Sophia paradisa* Nels. & Kenn., Proc. Biol. Soc. Wash. 19: 155. 1906. (p. 340)

DESCURAINIA PINNATA var. *Nelsonii* (Rydb.) comb. nov. *Sophia Nelsonii* Rydb., Bull. Torr. Club 34: 436. 1907. (p. 341)

PARRYA CHEIRANTHOIDES var. *lanuginosa* (Wats.) comb. nov. *P. Menziesii* var. *lanuginosa* Wats. in Gray Syn. Fl. 1: 152. 1895. (p. 352)

Streptanthus hastatus (Wats.) comb. nov. *Caulanthus hastatus* Wats., Bot. King Geol. Expl. 40th. Par. 5: 28. pl. 3. 1871. (p. 353)

Sedum glanduliferum (Hend.) comb. nov. *Cotyledon glanduliferum* Hend., Rhodora 32: 26. 1930. (p. 361)

Sedum oregonense (Wats.) comb. nov. *Cotyledon oregonensis* Wats., Proc. Am. Acad. Sci. 18: 373. 1862. (p. 361)

POTENTILLA GRACILIS Dougl. var. *dichroa* (Rydb.) comb. nov. *P. dichroa* Rydb., N. Am. Fl. 22: 319. 1908. (p. 393)

HORKELIA FUSCA var. *capitata* (Lindl.) comb. nov. *H. capitata* Lindl., Bot. Reg. 23, sub. pl. 1997. 1837. (p. 398)

HORKELIA FUSCA var. *pseudocapitata* (Rydb.) comb. nov. *H. pseudocapitata* Rydb. in Howell, Fl. N. W. Am. 180. 1898. (p. 398)

HORKELIA FUSCA var. *parviflora* (Nutt.) comb. nov. *H. parviflora* Nutt. ex. Hook. & Arn. Bot. Beechey Voy. suppl. 338. 1838. (p. 399)

HORKELIA FUSCA var. *filicoides* (Crum) comb. nov. *Potentilla Douglasii* var. *filicoides* Crum. Leaflet West. Bot. 1: 100. 1934. (p. 399)

HORKELIA CONGESTA var. *nemorosa* (Keck) comb. nov. *H. congesta* subsp. *nemorosa* Keck, Lloydia 1: 108. 1938. (p. 399)

Geum gracilipes (Piper) comb. nov. *Potentilla gracilipes* Piper, Bull. Torr. Club 27: 392. 1900. (By error as *Geum filipes*, p. 402)

ROSA PISOCARPA var. *ultramontana* (Wats.) comb. nov. *R. californica* var. *ultramontana* Wats. in Brew. & Wats. Bot. Calif. 1: 87. 1876. (By error as *R. pisocarpa* var. *transmontana*, p. 404)

CERCOCARPUS LEDIFOLIUS var. *hypoleucus* (Rydb.) comb. nov. *C. hypoleucus* Rydb., N. Am. Fl. 22: 424. 1913. (p. 407)

Astragalus Laurentii (Rydb.) comb. nov. *Homalobus Laurentii* Rydb., Bull. Torr. Club 51: 15. 1924. (p. 443)

Astragalus subglaber (Rydb.) comb. nov. *Homalobus subglaber* Rydb., Bull. Torr. Club 51: 17. 1924. (p. 444)

ASTRAGALUS REVENTUS var. *Hoodianus* (Howell) comb. nov. *A. Hoodianus* Howell, Erythea, 1: 111. 1893. (p. 444)

Astragalus lagopinus (Rydb.) comb. nov. *Xylophacos lagopinus* Rydb., Bull. Torr. Club 52: 372. 1925. (p. 445)

ASTRAGALUS HOOKERIANUS var. *siskiyouensis* (Rydb.) comb. nov. *Phaca siskiyouensis* Rydb., N. Am. Fl. 24: 340. 1929. (p. 446)

ASTRAGALUS FORWOODII var. **wallowensis** (Rydb.) comb. nov. *Atelophragma wallowense* Rydb., Bull. Torr. Club 55: 122. 1928. (p. 447)

ASTRAGALUS CONJUNCTUS var. **Sheldoni** (Rydb.) comb. nov. *Tium Sheldoni* Rydb., N. Am. Fl. 24: 393. 1929. (p. 448)

ASTRAGALUS LENTIGINOSUS var. **cornutus** (Rydb.) comb. nov. *Cystium cornutum* Rydb., N. Am. Fl. 24: 412. 1929. (p. 449)

ASTRAGALUS LENTIGINOSUS var. **platyphyllidium** (Rydb.) comb. nov. *Cystium platyphyllidium* Rydb., N. Am. Fl. 24: 410. 1929. (p. 449)

VIOLA PRAEMORSA var. **major** (Hook.) comb. nov. *V. Nuttallii* var. *major* Hook., Fl. Bor. Am. 1: 79. 1830. (p. 486)

VIOLA PRAEMORSA var. **linguaefolia** (Nutt.) comb. nov. *V. linguaefolia* Nutt., Torr. & Gray, Fl. 1: 141. 1838. (p. 486)

VIOLA PURPUREA var. **atriplicifolia** (Greene) comb. nov. *V. atriplicifolia* Greene, Pitt. 3: 38. 1896. (p. 486)

EPILOBIUM GLANDULOSUM var. **cinerascens** (Piper) comb. nov. *E. cinerascens* Piper, Proc. Biol. Soc. Wash. 31: 75. 1918. (p. 494)

EPILOBIUM PANICULATUM var. **Hammondi** (Howell) comb. nov. *E. Hammondi* Howell, Fl. N. W. Am. 224. 1903. (p. 497)

MENZIESIA FERRUGINEA var. **glabella** (Gray) comb. nov. *M. glabella* Gray, Syn. Fl. N. Am. 2: 39. 1878. (p. 542)

PHLOX SPECIOSA var. **occidentalis** (Dur.) comb. nov. *P. divaricata* var. *occidentalis* Dur., Proc. Acad. Nat. Sci. Phila. 3: 97. 1855. (p. 570)

PHLOX SPECIOSA var. **lanceolata** (E. Nels.) comb. nov. *P. lanceolata* E. Nels., Rev. W. Am. Phlox 29. 1899. (p. 570)

PHLOX LONGIFOLIA var. **compacta** (Brand) comb. nov. *P. Stansburyi* var. *compacta* Brand in Engler, Pflanzenr. 4²⁵⁰: 67. 1907. (p. 571)

PHLOX LONGIFOLIA var. **longipes** (Jones) comb. nov. *P. linearifolia* var. *longipes* Jones, Contrib. West. Bot. 12: 53. 1908. (p. 571)

PHLOX LONGIFOLIA var. **humilis** (Dougl.) comb. nov. *P. humilis* Dougl. ex Hook. Fl. Bor. Am. 2: 72. 1838. (p. 571)

PHLOX LONGIFOLIA var. **calva** (Wherry) comb. nov. *P. longifolia* subsp. *calva* Wherry, Proc. Acad. Nat. Sci. Phila. 90: 136. 1938. (p. 571)

PHLOX DOUGLASHI var. **rigida** (Benth.) comb. nov. *P. rigida* Benth. in DC., Prodr. 9: 306. 1845. (p. 571)

PHLOX DOUGLASHI var. **Hendersonii** (E. Nels.) comb. nov. *P. condensata* var. *Hendersonii* E. Nels., Rev. W. N. Am. Phlox 14. 1899. (p. 571)

PHLOX DIFFUSA var. **longistylis** (Wherry) comb. nov. *P. diffusa* subsp. *longistylis* Wherry, Proc. Acad. Nat. Sci. Phila. 90: 139. 1938. (p. 572)

PHLOX DIFFUSA var. **subcarinata** (Wherry) comb. nov. *P. dif-*

fusa subsp. *subcarinata* Wherry, Journ. Wash. Acad. Sci. 29: 517. 1939. (p. 572)

PHLOX DIFFUSA var. *scleranthifolia* (Rydb.) comb. nov. *P. scleranthifolia* Rydb., Mem., N. Y. Bot. Gard. 1: 313. 1900. (p. 572)

PHLOX HOODII var. *canescens* (Torr. & Gray) comb. nov. *P. canescens* Torr. & Gray, Pac. R. Rept. 2²: 122. 1855. (p. 572)

APLOPAPPUS CARTHAMOIDES var. *rigidus* (Rydb.) comb. nov. *Pyrrocoma rigida* Rydb., Bull. Torr. Club 27: 624. 1900. (p. 712)

APLOPAPPUS RACEMOSUS var. *halophilus* (Greene) comb. nov. *Pyrrocoma halophila* Greene, Leaf. Bot. Obs. & Crit. 2: 16. 1909. (By error as *A. racemosus* var. *halophiloides*, p. 712)

APLOPAPPUS RACEMOSUS var. *duriusculus* (Greene) comb. nov. *Pyrrocoma duriuscula* Greene, Leaf. Bot. Obs. & Crit. 2: 16. 1909. (p. 712)

APLOPAPPUS RACEMOSUS var. *glomeratus* (Nutt.) comb. nov. *Homapappus glomeratus* Nutt., Trans. Am. Phila. Soc. n. ser. 7: 331. 1840. (p. 712)

APLOPAPPUS RACEMOSUS var. *brachycephalus* (Nels.) comb. nov. *Pyrrocoma brachycephala* Nels., Bot. Gaz. 37: 265. 1904. (p. 713)

APLOPAPPUS RACEMOSUS var. *congestus* (Greene) comb. nov. *Pyrrocoma congesta* Greene, Pitt. 3: 23. 1896. (p. 713)

APLOPAPPUS LANCEOLATUS var. *tenuicaulis* (D. C. Eat.) comb. nov. *A. tenuicaulis* D. C. Eat., Bot. King Geol. Expl. 40th. Par. 5: 160. 1871. (p. 713)

APLOPAPPUS HIRTUS var. *sonchifolius* (Greene) comb. nov. *Pyrrocoma sonchifolia* Greene, Leaf. Bot. Obs. & Crit. 2: 18. 1909. (p. 713)

APLOPAPPUS HIRTUS var. *lanulosus* (Greene) comb. nov. *Pyrrocoma lanulosa* Greene, Leaf. Bot. Obs. & Crit. 2: 16. 1909. (p. 713)

APLOPAPPUS UNIFLORUS var. *Howellii* (Gray) comb. nov. *A. Howellii* Gray, Syn. Fl. 1², suppl.: 446. 1886. (p. 713)

ANTENNARIA LUZULOIDES var. *oblanceolata* (Rydb.) comb. nov. *A. oblanceolata* Rydb., Mem. N. Y. Bot. Gard. 1: 409. 1900. (p. 741)

ARTEMISIA CAMPESTRIS var. *spithamaea* (Pursh) comb. nov. *A. spithamaea* Pursh, Fl. Am. Sept. 522. 1814. (p. 768)

ARTEMISIA CAMPESTRIS var. *pycnocephala* (Less.) comb. nov. *Oligosporus pycnocephalus* Less., Linnaea 6: 524. 1831. (p. 768)

ARTEMISIA CAMPESTRIS var. *pacifica* (Nutt.) comb. nov. *A. pacifica* Nutt., Trans. Am. Phila. Soc. ser. 2, 7: 401. 1841. (p. 768)

SENECIO TRIANGULARIS var. *trigonophyllus* (Greene) comb. nov. *S. trigonophyllus* Greene, Pitt. 3: 106. 1896. (p. 780)

CREPIS RUNCINATA var. *imbricata* (Babc. & Steb.) comb. nov. *C. runcinata* subsp. *imbricata* Babc. & Steb., Carneg. Inst. Wash. Publ. 504: 102. 1938. (p. 804)

CREPIS MODOCENSIS var. *subacaulis* (Kellogg) comb. nov. *C. occidentalis* var. *subacaulis* Kellogg, Proc. Calif. Acad. Sci. 5: 50. 1873. (p. 805)

CREPIS ATRIBARBA var. *originalis* (Babc. & Steb.) comb. nov. *C. atribarba* subsp. *originalis* Babc. & Steb., Carneg. Inst. Wash. Publ. 504: 162. 1938. (p. 806)

CREPIS OCCIDENTALIS var. *pumila* (Rydb.) comb. nov. *C. pumila* Rydb., Mem. N. Y. Bot. Gard. 1: 462. 1900. (p. 806)

CREPIS BAKERI var. *Cusickii* (Eastw.) comb. nov. *C. Cusickii* Eastw., Bull. Torr. Club 30: 502. 1903. (p. 806)

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AN UNDESCRIBED SPECIES OF STIPA FROM CALIFORNIA

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Due to the growing interest in the native forage plants of California, particular attention is now being given by a number of workers to *Stipa pulchra* Hitchc., one of the most common and valuable of the native perennial forage grasses in the valley and foothill regions of this state. Several people, including the present writers, have noticed that this species as recognized in the current manuals actually consists of two distinct types. One, with deep green foliage, relatively broad leaves, stiffer panicle branches, large glumes, thick, fusiform lemmas, and stout, stiff awns, is predominant in the outer Coast Ranges and the wooded parts of the Sierra Nevada foothills. This is typical *S. pulchra*, of which the type came from Healdsburg, Sonoma County. The other form, with somewhat glaucous foliage, narrower leaves, flexuous, often nodding panicle branches, smaller, narrower glumes, slender lemmas, and slender, often flexuous awns, occurs chiefly in the treeless parts of the inner Coast Ranges, the San Joaquin Valley (in scattered areas undisturbed by cultivation), the valleys of southern California, and the edges of the deserts. The two types have been given different common names, typical *S. pulchra* being known as purple needle grass, and the slender, interior type as nodding needle grass. The writers have observed these two needle grasses carefully during two seasons of collecting in the field, have grown and compiled extensive morphological data on several cultures of each, and have examined their chromosomes at both mitosis and meiosis. From these observations enough evidence has accumulated to warrant the recognition of the interior type as a distinct species. It may be described as follows.

Stipa cernua sp. nov. Folia glauca angusta; panicula ampla, ramis tenuis, flexuosis, cernuis; glumae inaequales, 12–19 mm. longae, 1–1.4 mm. latae, pallidae vel roseo-purpureae, semper 3-nervatae; lemma angusta, 5–10.5 mm. longa, cum fructu 0.6–1